

A G E N D A
UTAH BOARD OF WATER RESOURCES

Department of Natural Resources
Auditorium
1594 W. North Temple
Salt Lake City, Utah

December 7, 2012

10:00 a.m.

- I. CALL TO ORDER
- II. APPROVAL OF MINUTES - October 11, 2012
- III. CHAIR'S REPORT
- IV. WATER SUPPLY REPORT
- V. FEASIBILITY REPORTS

	<u>County</u>
E284 Mountain Green Secondary Water Co.	Morgan
E319 Parowan City	Iron
- VI. COMMITTAL OF FUNDS REPORTS

E306 Huntsville Irr. Co.	Weber
E297 North Summit Pressurized Irr. Co.	Summit
E231 Moroni Irr. Co.	Sanpete
- VII. SPECIAL ITEM REPORTS

E077 & C035 New Escalante Irr. Co. (Additional Funds)	Garfield
C042 Huntington-Cleveland Irr. Co. (Additional Funds)	Emery
C019 Fremont Irr. Co. (Additonal Funds)	Wayne
E291 Baker Reservoir Co. (Withdrawal)	Washington
E315 Deepwater Distribution Co. (Withdrawal)	Wasatch
- VIII. LAKE POWELL PIPELINE PROJECT REPORT
- IX. DIRECTOR'S REPORT
- X. ADJOURNMENT

BRIEFING MEETING AGENDA

UTAH BOARD OF WATER RESOURCES

Division of Water Resources
Room 314
1594 W. North Temple
Salt Lake City, Utah

December 7, 2012

8:30 a.m.

- I. WELCOME/CHAIR'S REPORT Chairman Paulick

- II. DISCUSSION OF PROJECTS

- III. OTHER ITEMS

BOARD OF WATER RESOURCES

REVOLVING CONSTRUCTION FUND

Funding Status December 7, 2012

Funds Available for Projects This FY	\$	9,484,000
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Projects Contracted This FY

1 Cache Highline Water Association	E269		\$	2,200,000
2 East Mill Creek Water Co - Amend.	E296			4,000
3 Cottonwood Gooseberry Irrigation Co	C041	**Grant		250,000
4 Kaysville Irrigation Co	C044	**Grant		50,000
5 Huntington-Cleveland Irrigation Co	C042			77,000
6 Huntington-Cleveland Irrigation Co	C042	**Grant		643,000
				\$ 3,224,000
Total Funds Contracted				\$ 3,224,000
Funds Balance				\$ 6,260,000

Projects with Funds Committed

1 Leeds Water Co	E289		\$	104,000
* 2 Huntington-Cleveland Irrigation Co - Addl. Funds	C042			13,000
* 3 Huntington-Cleveland Irrigation Co - Addl. Funds	C042	**Grant		117,000
* 4 Fremont Irrigation Co - Additional Funds	C019			9,000
* 5 Fremont Irrigation Co - Additional Funds	C019	**Grant		81,000
* 6 New Escalante Irrigation Co - Additional Funds	E077			380,000
* 7 New Escalante Irrigation Co - Additional Funds	C035	**Grant		620,000
8 Manderfield Irrigation & Reservoir Co	C043	**Grant		80,000
9 Rockville Town Ditch Co	E313			145,000
				\$ 1,549,000
Total Funds Committed				\$ 1,549,000
Funds Balance				\$ 4,711,000

Projects Authorized

1 Paragoonah Canal Co	E258		\$	530,700
2 Paragoonah Canal Co	E258	** Grant		75,700
3 Bullion Creek Irrigation Co	E172			113,000
4 Moon Lake Water Users Association	E309			340,000
				\$ 1,059,000
Total Funds Authorized				\$ 1,059,000
Remaining Funds Available				# \$ 3,652,000

* To be presented at Board Meeting
 ** Dam Safety Projects

End of year balance if all listed projects were fully paid

BOARD OF WATER RESOURCES

CITIES WATER LOAN FUND

Funding Status December 7, 2012

Funds Available for Projects This FY	\$	5,033,000
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Bonds Closed This FY

1 None	\$	-	
Total Bonds Closed		\$	-
Funds Balance		\$	5,033,000

Projects with Funds Committed

1 None	\$	-	
Total Funds Committed		\$	-
Funds Balance		\$	5,033,000

Projects Authorized

1 Emigration Improvement District	L573	\$	2,326,000	
Total Funds Authorized			\$	2,326,000
Remaining Funds Available		#	\$	2,707,000

* To be presented at Board Meeting

End of year balance if all listed projects were fully paid

BOARD OF WATER RESOURCES

CONSERVATION & DEVELOPMENT FUND

Funding Status December 7, 2012

<u>Funds Available for Projects This FY</u>	\$ 29,771,000
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Projects Contracted/Bonds Closed This FY

1 Summit Creek Irrigation and Canal Co (Phase 1)	E308	\$ 510,000	
2 Cub River Irrigation Co	E301	2,040,000	
3 Hooper Irrigation Co	E311	296,000	
4 Levan Irrigation Co	E314	509,000	
Total Funds Contracted/Closed			\$ 3,355,000
Funds Balance			\$ 26,416,000

Projects with Funds Committed

1 Settlement Canyon Irrigation Co (Phase 1)	E240	\$ 891,400	
2 Dry Gulch Irrigation Co, Class D & E (Phase 1)	E285	586,000	
3 Ouray Park Irr Co	E305	1,126,000	
4 Cache Highline Water Association	E269A	3,000,000	
* 5 Moroni Irr Co	E231	2,975,000	
* 6 Huntsville Irrigation Co	E306	2,146,000	
* 7 North Summit Pressurized Irrigation Co	E297	3,910,000	
Total Funds Committed			\$ 14,634,000
Funds Balance			\$ 11,782,000

Projects Authorized

1 Brooklyn Canal Co	E223	\$ 1,000,000	
2 Fremont Irrigation Co	E279	2,890,000	
3 Dry Gulch Irrigation Co (Class B)	E302	810,000	
4 Summit Creek Irrigation and Canal Co (Phase 2+)	E308	2,380,000	
5 Newton Water Users Assoc	E280	3,060,000	
* 6 Mountain Green Secondary Water Co	E284	1,785,000	
* 7 Parowan City	E319	3,335,000	
Total Funds Authorized			\$ 15,260,000
Remaining Funds Available		#	\$ (3,478,000)

* To be presented at Board Meeting

End of year balance if all listed projects were fully paid

BOARD OF WATER RESOURCES

RECAPITALIZATION FUND

BOND A

Funds Available for Projects This FY	\$	270,000
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Projects Contracted/Bonds Closed This FY
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1 None	\$	-	
Total Funds Contracted/Closed	\$	-	
Funds Balance	\$	270,000	

Projects with Funds Committed

1 None	\$	-	
Total Funds Committed	\$	-	
Funds Balance	\$	270,000	

Projects Authorized

1 None	\$	-	
Total Funds Authorized	\$	-	
Remaining Funds Available	#	\$	270,000

BOND B

Funds Available for Projects This FY	\$	3,554,000
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Projects Contracted/Bonds Closed This FY
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1 None	\$	-	
Total Funds Contracted/Closed	\$	-	
Funds Balance	\$	3,554,000	

Projects with Funds Committed

1 Weber Basin WCD (Phase 2 & 3)	E225	\$	3,400,000	
Total Funds Committed		\$	3,400,000	
Funds Balance		\$	154,000	

Projects Authorized

1 None	\$	-	
Total Funds Authorized	\$	-	
Remaining Funds Available	#	\$	154,000

BOARD OF WATER RESOURCES

December 7, 2012

ADDITIONAL ACTIVE PROJECTS

Sponsor	No.	Fund	Est. Board Cost	Total Cost
1 Woodruff Irrigating Co	D680	C&D	\$ 600,000	\$ 800,000
2 Kane County WCD	D828	C&D	1,500,000	2,000,000
3 Weber Basin WCD (Secondary, Ph 3-5)	E029R3+	C&D	21,899,000	26,105,000
4 Hooper Irr Co (Press Irr, Ph 3+)	E060R3+	C&D	11,033,000	12,980,000
5 East Juab County WCD	E071	C&D	375,000	500,000
6 Ferron Canal & Res Co	E082	C&D	2,625,000	3,500,000
7 Parowan City (Bond Ins Grant)	E121	C&D	34,000	2,034,000
8 Fremont Irr Co	E131	C&D	1,500,000	2,000,000
9 Kingston Irr Water Co	E169	RCF	85,000	240,000
10 Fountain Green Irr Co (Flow Augment)	E186	RCF	75,000	100,000
11 San Juan WCD	E198	C&D	3,000,000	4,000,000
12 Davis & Weber Counties Cnl Co (Secondary)	E215R6	C&D	2,592,500	3,050,000
13 Corinne City	E216	C&D	80,000	100,000
14 Weber Basin WCD (Phase 4+)	E225R4+	C&D	21,350,000	41,910,000
15 Devil's Pass Water Co	E226	RCF	157,500	210,000
16 Barton-LeFevre-Tebbs Co	E229	RCF	487,500	650,000
17 Kaysville Irr Co (Amend)	C037	RCF	1,422,000	1,580,000
18 Westview Irr Co	E265	RCF	112,500	150,000
19 Spanish Fork South Irr Co	E294	RCF	332,000	690,000
20 Green Hill Water & Sewer SSD	E307	C&D	483,000	644,000
21 Westview Irr Co	E310	RCF	150,000	200,000
22 Cottonwood Gooseberry Irrigation Co	C041	RCF	2,000,000	2,000,000
23 Weber Basin WCD	E312	C&D	85,000,000	100,000,000
24 Manderfield Irr Co	C043	RCF	747,000	830,000
25 Hatch Irr Co	E318	RCF	178,500	210,000
26 Ferron Canal & Res Co	E320	C&D	2,720,000	3,200,000
27 South Willard Water Co	E317	C&D	1,700,000	2,000,000
28 Uintah WCD	E316	C&D	51,000,000	60,000,000
* 29 Northwest Irrigation Co	E321	RCF	408,000	480,000
* 30 Marion Waterworks Co	E322	RCF	212,500	250,000
Subtotal			\$ 213,646,500	\$ 272,163,000

* New Application

INACTIVE PROJECTS

Long Term Large Water Conservation Projects

1 Sanpete WCD (Narrows Dam)	D377
2 Wayne County WCD	D494
3 Cedar City Valley Water Users	D584
4 Bear River WCD	D738
5 Central Utah WCD (Prepay FY98,99,00)	D960
6 Woodruff Irr Co (Woodruff Cr Dam Enlargement)	E059

BOARD OF WATER RESOURCES

Feasibility Report

Conservation and Development Fund

Appl. No.: **E-284**
Received: 9/30/10
Approved: 10/14/10

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: ***MOUNTAIN GREEN SECONDARY WATER COMPANY***

President: Rulon Gardner

LOCATION: The proposed project is located north and east of the unincorporated community of Mountain Green in Morgan County.

EXISTING CONDITIONS & PROBLEMS: The sponsor's service area includes the part of Mountain Green east of Trapper's Loop Road to the Peterson exit on Interstate 80; however, only 196 homes in two subdivisions (The Cottonwoods and Rollins Ranch) currently receive water. Three of the proposed nine phases of The Cottonwoods have been developed and include 340 lots, 287 of which have been purchased and of those 180 have houses. Phase IV is in the works and will add an additional 77 lots. Rollins Ranch has 117 lots, 72 of which have been purchased with 16 houses constructed.

Cottonwood Mutual Water Company, the local culinary water supplier, covers basically the same service area as that of the sponsor and provides water to approximately 450 homes. Those not connected to a secondary system use culinary water for outdoor irrigation as well; however, the culinary water company requires all new houses in the subdivisions to connect to the secondary system. The sponsor has indicated that once adequate water rights and infrastructure are in place, connections to homes outside the subdivisions will be welcomed.

Irrigation water is diverted from Cottonwood Creek and Sulphur Springs, then split with 1/3 going to the Northwest Irrigation Company. Of the remaining 2/3,

half goes to the sponsor and half to the Wilkinson family by being piped to the Wilkinson's farm ground and the sponsor's secondary irrigation system through a common pipeline. The pipeline is part of a project installed by the Wilkinsons in the mid-1970's with board funding; however, the sponsor now owns, operates, and maintains it.

The sponsor owns 238 shares of Northwest Irrigation Company stock, which it uses to serve Rollins Ranch subdivision. It uses its own share of water to serve The Cottonwoods. The Cottonwoods developer has an agreement with the Wilkinsons to purchase water rights and land on which the additional phases will be built.

Cottonwood Creek is usually dry from mid-July through August at the diversion point, leaving only the spring water to be shared; this results in extreme shortages to the sponsor and the Wilkinsons. It has been noted the existing diversion structure sits atop gravels with groundwater close to the surface even during dry times. Also, approximately 2/3 mile upstream of the diversion, Cottonwood Creek passes through "The Narrows" where the creek flows year-round.

The only existing storage facility on the sponsor's system is Silverleaf Reservoir, a three acre-foot pond at the downstream end of the system from which the sponsor pumps. Additional source development and storage on the system would help carry existing and future users through the summer.

The sponsor is considering the construction of two reservoirs on the system. Cobble Creek Reservoir would hold just under 20 acre-feet, be fed from existing pipelines, and gravity feed into the sponsor's system. North Side Creek Reservoir would have a capacity of approximately 130 acre-feet, but would be located in an old gravel pit and all irrigation water would need to be pumped into the system. It has been designed as a water-ski lake that would be used by the residents of the proposed 22 lot North Side Creek subdivision, which would be located immediately to the south. The State Engineer has approved plans for the North Side Creek Dam.

PROPOSED
PROJECT:

The sponsor is requesting financial assistance from the board to make improvements to its secondary irrigation system. The project would include a new diversion on Cottonwood Creek near "The Narrows", about 2/3 of a mile of 16-inch pipeline to the splitter box near the existing diversion, a cutoff wall just upstream of the existing diversion down to bedrock to catch any groundwater that may be bypassing the structure, a 5.3 acre-foot regulating pond, a 12-inch pipeline tying the new pond to the system, a shallow well and pumphouse near the proposed North Side Creek Reservoir, and the reservoir itself, which is designed to be lined, about 2,200 feet long (divided into two water-ski lanes by an earthen berm, flat bottomed and nine feet deep), and is estimated to cost \$2.8 million. The estimated cost for the entire project is \$4.3 million.

Technical assistance for the system improvements is being provided by Horrocks Engineers of Ogden and engineering for the proposed dams is being provided by Ensign Engineering of Sandy.

Staff recommends the board consider as an alternative: not funding the North Side Creek Reservoir but rather funding construction of Cobble Creek Reservoir and all other proposed project features as well as an additional well and necessary appurtenant piping in order to make up for reduced storage capacity (130 acre-feet in North Side Creek versus 20 acre-feet in Cobble Creek).

COST ESTIMATE:

The following cost estimate is for staff's recommended project and is based on information from the sponsor:

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
1.	Cobble Creek Res.	LS	\$ 770,000	\$ 770,000
2.	Regulating Pond	LS	185,000	185,000
3.	New Diversion	LS	70,000	70,000
4.	Cutoff Wall	LS	45,000	45,000
5.	HDPE Pipe			
	16-inch	5,000 LF	30	150,000
	12-inch	8,500 LF	26	221,000
6.	Pumphouse	LS	20,000	20,000
7.	Wells	2 EA	100,000	<u>200,000</u>

Construction Cost	\$1,661,000
Contingencies	166,000
Legal and Administrative	23,000
Design and Construction Engineering	<u>250,000</u>
TOTAL	\$2,100,000

COST SHARING
& REPAYMENT:

The cost sharing and repayment on staff's recommended option is as follows:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$1,785,000	85%
Sponsor	<u>315,000</u>	<u>15</u>
TOTAL	\$2,100,000	100%

If the board authorizes the project, it is suggested it be purchased at 3% interest over approximately 17 years with annual payments starting at \$120,000 and increasing 2.3% each year (state's projected growth rate for Morgan County).

ECONOMIC
FEASIBILITY:

Staff's recommended project is economically feasible if its cost of implementation is less than the cost to implement the next best alternative. In this case the best alternative to having a secondary lawn and garden irrigation system is to provide all water needs through the culinary water system.

According to the sponsor, the culinary water system would need additional wells, piping, and a storage tank in order to supply outdoor irrigation water. In addition, there would be an annual cost to lease about 200 acre-feet of culinary grade water. Additional operation, maintenance, and replacement costs for the expanded culinary system were also taken into account. When all benefits and costs are discounted to present worth over 50 years, the benefit to cost ratio is 1.34.

FINANCIAL
FEASIBILITY:

Based on the board's water affordability guideline, residents of Mountain Green could pay \$108.80 per month for all water. The anticipated cost of water when the first loan payment is due, based on 200 connections, is as follows:

	<u>Annual Cost</u>	<u>Cost/Conn/Mo</u>
Average Culinary Bill	\$100,800	\$42.00
Operation & Maintenance	40,000	16.67
Proposed BWRe Loan	<u>120,000</u>	<u>50.00</u>
TOTAL	\$260,800	\$108.67

The sponsor assesses an annual fee based on lot size as follows:

<u>Lot Size</u>	<u>Annual Rate</u>	<u>Lot Size</u>	<u>Annual Rate</u>
1/4 acre	\$114	1/3 acre	\$132
1/2 acre	\$156	3/4 acre	\$192
1 acre	\$216	5 acres	\$288
10 acres	\$468		

BENEFITS: Constructing the project will add additional source and storage to the system, which will enable the sponsor to provide adequate secondary water to its users.

PROJECT SPONSOR: Mountain Green Secondary Water Company was incorporated on November 4, 2009, and is in good standing with the state Department of Commerce. Shares are awarded based on lot size (typically one share for lots smaller than 1/2 acre, two for lots between 1 and 1/2 acre, and more as lot size increases) and are issued as each lot is sold. Only shareholders with homes are assessed.

The sponsor has not previously received funding from the board.

WATER RIGHTS & SUPPLY: The sponsor holds water rights 35- 8247, 11718, and 12275 as amended under Change Application a33923. These rights allow diversion of Cottonwood Creek and Sulphur Springs of up to 6.21 cfs during high water and one third of the flow the remainder of the season up to 414.99 acre-feet, to irrigate 132 acres. The rights also include a storage right of three acre-feet for the existing Silverleaf Reservoir and 100, 20, and 80 acre-feet for three proposed reservoirs (North Side Creek, Cobble Creek, and Byram, respectively).

- EASEMENTS: All proposed project features will be on privately owned land. Obtaining required easements is not perceived to be a problem.
- ENVIRONMENTAL: A new diversion on Cottonwood Creek and a cutoff wall upstream of the existing diversion are being proposed, which will affect historic stream flow. Water storage facilities that will inundate small areas are also being proposed.
- Construction activity will temporarily disrupt the environment but have no long-term effects.
- WATER CONSERVATION: The sponsor will be required to adopt a rule prohibiting outdoor residential irrigation between the hours of 10:00 a.m. and 6:00 p.m. and prepare a water management and conservation plan.
- SPONSOR'S RESPONSIBILITIES: If the board authorizes the proposed project, the sponsor must do the following before the funding agreement can be executed:
1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.
 2. Pass a resolution by the appropriate (as defined in the company's Articles of Incorporation and Bylaws) majority of company stock authorizing its officers to do the following:
 - a. Assign properties, easements, and water rights required for the project to the Board of Water Resources.
 - b. Enter into a contract with the Board of Water Resources for construction of the project and subsequent purchase from the board.
 3. Have an attorney give the Board of Water Resources a written legal opinion that:
 - a. The company is legally incorporated for at least the term of the purchase contract and is in good standing with the state Department of Commerce.
 - b. The company has legally passed the above resolution in accordance with the requirements

of state law and the company's Articles of Incorporation and Bylaws.

c. The company has obtained all permits required for the project.

d. The company owns all easements and rights-of-way for the project, as well as the land on which the project is located, and that title to these easements, rights-of-way, and the project itself can be legally transferred to the board.

e. The company's water rights applicable to the project are unencumbered and legally transferable to the Board of Water Resources, and that they cover the land to be irrigated by the project.

4. Obtain approval of all final plans and specifications from the Division of Water Resources and those dealing with the dam by the Division of Water Rights.

5. Prepare a water management and conservation plan for its service area, and obtain approval of it from the Division of Water Resources.

6. Submit a letter to the Division of Water Resources noting completion and acceptance of a Water Conveyance Facilities Safety Management Plan as required by the First Substitute House Bill 60, as passed by the 2010 State Legislature. Also, be in compliance with 2010 House Bill 298.

7. Obtain Stream Alteration Permits, Change in Point of Diversion, and all other water right-related permits necessary for the project from the State Engineer.

8. Adopt a rule prohibiting its users from irrigating residential landscapes between the hours of 10:00 a.m. and 6:00 p.m.

PROJECT
CONTACT
PEOPLE:

President:

Rulon Gardner
4000 West Old Highway Road
Mountain Green, UT 84050
Phone: 801-558-1879

Secretary:

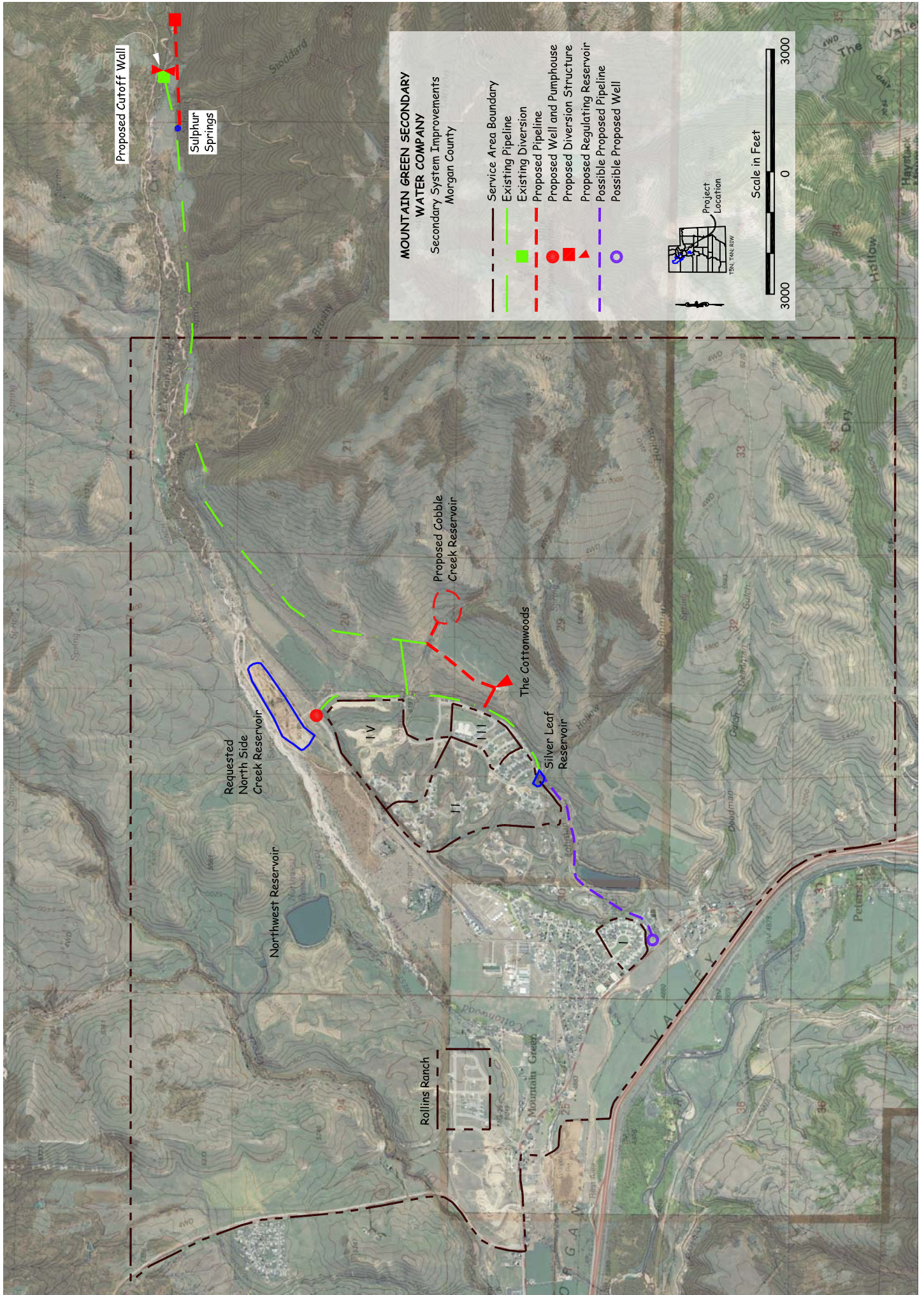
Skyler Gardner
4000 West Old Highway Road
Mountain Green, UT 84050
Phone: 801-814-4706

System Engineer:

Horrocks Engineers
3544 Lincoln Ave, Ste. 11
Ogden, UT 84401
Phone: 801-621-1025

Dam Engineer:

Ensign Engineering
45 West 10000 South, Ste 500
Sandy, UT 84070
Phone: 801-255-0529



BOARD OF WATER RESOURCES

Feasibility Report

Conservation and Development

Appl. No.: **E-319**

Received: 9/24/2012

Approved: 10/11/2012

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: **PAROWAN CITY**

Mayor: Donald G. Landes

LOCATION: The proposed project is located east of and within the City of Parowan in Iron County.

EXISTING CONDITIONS & PROBLEMS: Parowan City provides culinary water from wells and springs to just under 3,000 residents. Secondary irrigation water is supplied with diversions from Center Creek through a gravity pressurized system under city-owned shares in Parowan Reservoir Company.

The sponsor owns and operates two hydro-electric generating facilities and is also a member of Utah Associated Municipal Power Systems (UAMPS), from which it is contractually obligated to purchase power. This purchase exceeds the sponsor's current need and about 1/3 is sold as excess on the grid at a lower price.

The sponsor's Red Creek plant is located near Paragonah, has a maximum capacity of 400 kilowatts, and was upgraded about seven years ago. The Center Creek plant has a normal maximum operating capacity of 400 kilowatts, lies in the western part of the city, and because of aging equipment (mid-1950's vintage) has been out of operation since 2007. Also, the steel penstock is nearing its useful life and is experiencing more leaks as the years go by. FERC (Federal Energy Regulating Commission) is pressuring the sponsor to either upgrade or decommission the plant, remove over three miles of penstock, and restore the original pipeline alignment.

The Parowan Reservoir Company provides irrigation water to approximately 1,300 acres of farmland around Parowan in addition to secondary water in town (25% of its shares). It utilizes the Center Creek penstock to carry up to 11 cfs of its flow to a splitter structure adjacent to the hydro-electric plant (usually the entire supply after spring runoff). It is estimated over 30% of its water would be lost to seepage if the penstock were removed and water restored to the natural creek channel.

Even though the sponsor has adequate electric capacity through its Red Creek plant and membership in UAMPS, it recognizes the benefits to farmers, residents, and the city in upgrading its Center Creek plant. With the proposed restoration the sponsor will be able to sell additional excess power.

PROPOSED
PROJECT:

The sponsor is requesting financial assistance from the board to rehabilitate its Center Creek hydro-electric plant and replace the majority of its penstock with 20 to 24-inch HDPE or steel pipe. It is anticipated the project will be completed in two phases: the first phase would include installing new generating equipment, making improvements to the powerhouse, and replacing approximately 2,300 feet of penstock in town. The second phase would entail replacing about 15,600 feet of penstock from town towards the forebay at the plant. Technical assistance is being provided by Sunrise Engineering in Fillmore.

The project fits in Prioritization Category 2 (municipal project required to meet existing or impending need).

COST ESTIMATE:

The following cost estimate is based on the engineer's preliminary design and has been reviewed by staff:

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
PHASE I				
1.	Mobilization	LS	\$68,000	\$68,000
2.	Building Improvements	LS	105,000	105,000
3.	Equipment	LS	565,000	565,000
4.	Penstock Removal	1,700 LF	5.00	8,500
5.	20-inch Steel Pipe	2,300 LF	135	310,500

6. Road Repair	LS	110,000	<u>110,000</u>
Construction Cost			\$1,167,000
Contingencies			113,000
Legal and Administrative			40,000
FERC Licensing			50,000
Design and Construction Engineering			<u>230,000</u>
Phase I Total			\$1,600,000
PHASE II			
1. Mobilization	LS	50,000	50,000
2. Penstock Removal	15,500 LF	5.00	77,500
3. HDPE Pipe	8,300 LF	85	705,500
4. 20-inch Steel Pipe	7,200 LF	135	972,000
5. Rock Excavation	LS	25,000	<u>25,000</u>
Construction Cost			\$1,830,000
Contingencies			170,000
Legal and Administrative			40,000
FERC Licensing			10,000
Design and Construction Engineering			<u>275,000</u>
Phase II Total			<u>\$2,325,000</u>
PROJECT TOTAL			\$3,925,000

**COST SHARING
& REPAYMENT:**

The recommended cost sharing and repayment are:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$3,335,000	85%
Sponsor	<u>590,000</u>	<u>15</u>
TOTAL	\$3,925,000	100%

If the board authorizes the project, it is suggested the \$3,335,000 bonded indebtedness be returned at 1% interest over 20 years with annual payments of approximately \$158,400 the first 14 years and approximately \$312,000 the final six years (includes reserves).

The sponsor is seeking a WaterSMART grant that, if obtained, will reduce the board's cost sharing and repayment terms. Due to the possible grant, project phasing, and construction schedule, board funding may be divided and issued in two separate bonds.

**ECONOMIC
FEASIBILITY:**

This project is economically feasible if the cost of implementation is less than the cost to implement the next best alternative, which is to remove the penstock

and not rehabilitate the power plant. Without the project there is estimated to be a 30% loss of alfalfa production over 1,300 acres, resulting in an approximate \$318,000 net loss. With the project revenue from power generation will increase by about \$86,400 annually and operation and maintenance costs will be reduced. When all project benefits and costs are taken into account, the benefit/cost ratio is calculated to be 1.44.

FINANCIAL
FEASIBILITY:

The board has no set affordability guideline for power; therefore, staff compared the average monthly state-wide power bill (\$68) to the average monthly state-wide water bill (\$45) and determined that a reasonable guideline for power would be 1.5 times that for water. Based on that assumption, with a water affordability guideline calculated to be \$30.15, power users can afford to pay about \$45.25 monthly for power. The cost of power, based on 1,430 power connections, is:

	<u>Annual Cost</u>	<u>Cost/Conn/Mo</u>
Operation & Maintenance	\$550,000	\$32.05
UAMPS Contract Purchases	840,000	48.95
Power Sales (New & Surplus)	(288,000)	(16.78)
Existing Loan (thru 2027)	309,000	18.01
Proposed BWRe Loan (half)	<u>79,200</u>	<u>4.61</u>
TOTAL	\$1,490,200	\$86.84

The sponsor currently charges a \$17.92 base fee for power with a flat usage rate of \$0.094 per kilowatt-hour. Its average monthly water bill is \$25; a flat \$10.03 monthly fee is assessed for secondary water, resulting in a total cost of \$35.03 for all water; this exceeds the sponsor's water affordability guideline of \$30.15.

Parowan Reservoir Company has agreed to pay for half of the annual \$158,400 payment because its shareholders will benefit from replacing the penstock. The \$79,000 payment equates to \$33 per share or about \$60 per acre.

BENEFITS:

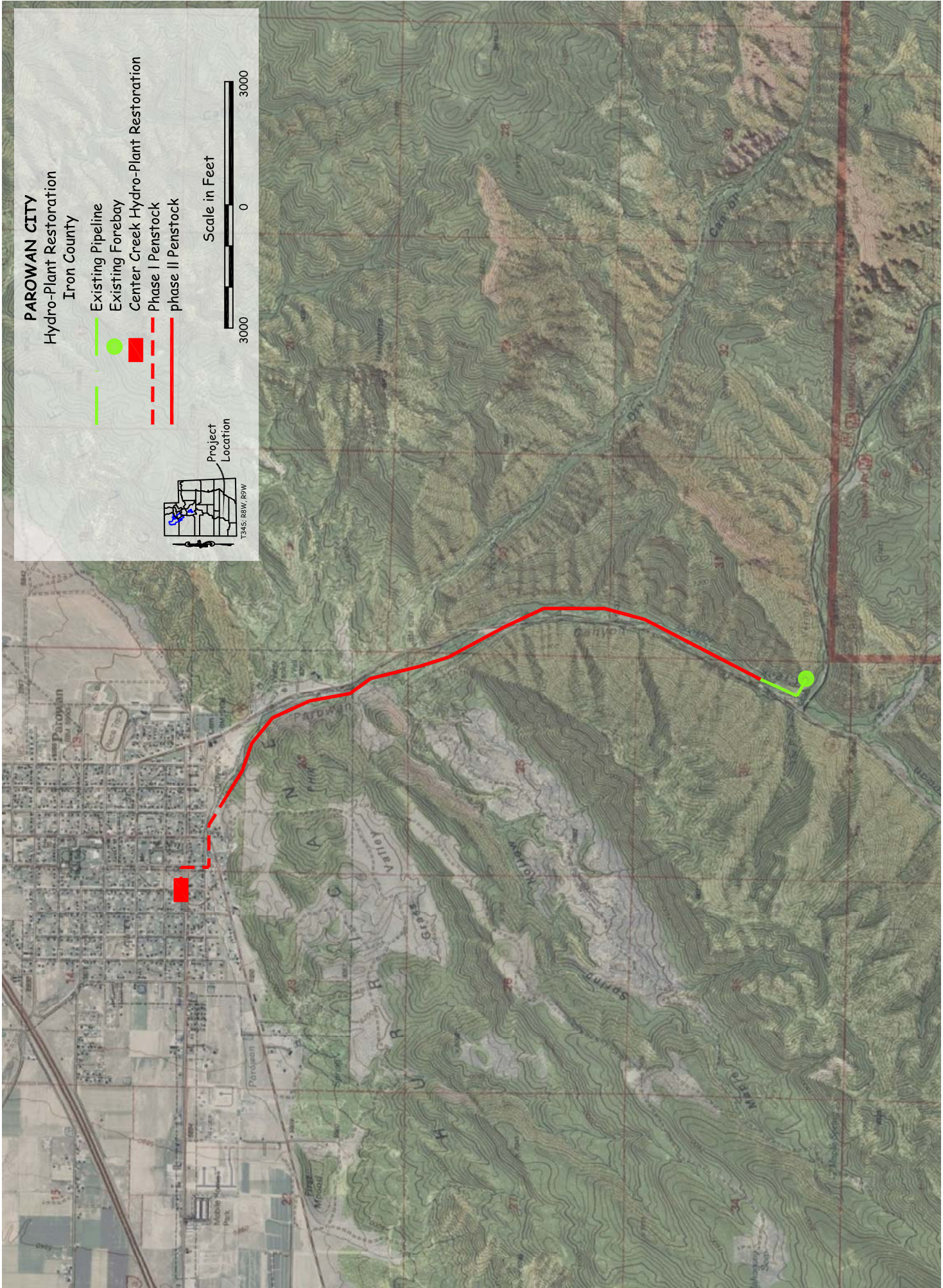
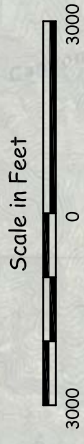
Rehabilitating the Center Creek hydro-electric plant and replacing the penstock will enable the sponsor to produce more power for residents or to sell as surplus. Area farmers will continue to utilize their irrigation water without seepage loss.

PROJECT SPONSOR:	Parowan City was the first community settled in the Cedar City area and was incorporated on February 6, 1851. The sponsor has obtained funding from the board on two occasions in the past: in 1979 for a culinary water pipeline project, and in 1987 to install its secondary irrigation system. Both projects have been paid off.
WATER RIGHTS & SUPPLY:	The sponsor owns water right 75-27, which allows non-consumptive use of up to 24 cfs for electric power generation.
EASEMENTS:	The sponsor owns the Center Creek hydro-electric plant building and penstock forebay property. The penstock traverses private and BLM ground; however, obtaining the required easements and permits is not perceived to be a problem.
ENVIRONMENTAL:	<p>As part of its FERC license renewal process, the sponsor will have to complete an environmental study of the project's impacts.</p> <p>The proposed project is not expected to have any detrimental effects on the environment beyond the usual dust and noise of the construction phase.</p>
WATER CONSERVATION:	If the proposed project is not constructed the penstock will have to be removed, resulting in an estimated loss of 1,200 acre-feet per year to seepage as irrigation water is returned to the natural stream channel.
SPONSOR'S RESPONSIBILITIES:	If the board authorizes the proposed project, a list of requirements and procedures necessary to sell the board a non-voted electric system revenue bond will be furnished to the sponsor. The sponsor will be required to verify it has adequate water rights and rights-of-way to construct the project, and be required to execute an agreement with the Parowan Reservoir Company for payment of half the project costs.

PROJECT	Mayor:	Donald G. Landes
CONTACT		P.O. Box 576
PEOPLE:		Parowan, UT 84761
		Phone: 435-477-9556
	City Manager:	Shayne Scott
		P.O. Box 576
		Parowan, UT 84761
		Phone: 435-477-3331
	Engineer:	Sunrise Engineering
		25 East 500 North
		Fillmore, UT 84631
		Phone: 435-743-6151

PAROWAN CITY
Hydro-Plant Restoration
Iron County

- Existing Pipeline
- Existing Forebay
- Center Creek Hydro-Plant Restoration
- Phase I Penstock
- Phase II Penstock



BOARD OF WATER RESOURCES

Committal of Funds

Conservation and Development Fund

Appl. No.: **E-306**
Received: 10/5/11
Approved: 10/13/11
Authorized: 12/8/11
Re-authorized: 10/11/12

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: **HUNTSVILLE IRRIGATION COMPANY**

President: Rex Mumford
8115 East 500 South
Huntsville, UT 84317
Phone: 801-721-2677

LOCATION: The proposed project is located near Huntsville in Weber County.

PROJECT SUMMARY: The sponsor is requesting financial assistance from the board to install about ten miles of pipeline, over 100 turnouts, and an intake structure.

COST ESTIMATE & SHARING: The cost estimate and sharing remain as authorized:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$2,146,000	53.3%
WaterSMART Grant	1,500,000	37.3
Sponsor	<u>379,000</u>	<u>9.4</u>
TOTAL	\$4,025,000	100%

PURCHASE AGREEMENT: If the board commits funds to the project, it is suggested the \$2,146,000 be repaid at 1% interest over approximately 35 years with annual payments of \$73,000.

BOARD OF WATER RESOURCES

Committal of Funds

Conservation and Development Fund

Appl. No.: **E-297**
Received: 5/10/11
Approved: 6/9/11
Authorized: 8/11/11

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: ***NORTH SUMMIT PRESSURIZED IRRIGATION COMPANY***

President: Ross Pace
1480 South Hoytsville Road
Coalville, UT 84017
Phone: 435-901-3833

LOCATION: The proposed project is located between Wanship and Coalville in Summit County.

PROJECT SUMMARY: In August 2011 the board authorized nearly \$3 million towards a \$5.5 million project to install a pressurized irrigation system to serve the area between Wanship and Coalville. At the time of authorization Hoytsville Irrigation Company stepped up to sponsor the project, which would also serve areas under six other companies. Since then the North Summit Pressurized Irrigation Company was formed to construct and operate the project.

As its part of the cost share, Weber Basin Water Conservancy District (WBWCD) has agreed to design and pay for modifications to the outlet on the Bureau of Reclamation's Wanship Dam and all project facilities which lie on federal land just downstream of the dam (estimated to be approximately \$350,000). WBWCD will operate and maintain those facilities as well as waive all annual fees associated with loss of power generation as a result of changes in points of diversion, and pay all fees related to the Warren Act, which requires entities that receive benefits from federal facilities such as Wanship Dam help pay the cost of the facility.

Changes to the design, including the addition of a pump station, have resulted in an increase in the project cost.

COST ESTIMATE
& SHARING:

The authorized and proposed cost estimate and sharing are as follows:

<u>Agency</u>	<u>Authorized Cost Sharing</u>	<u>% of Total</u>	<u>Proposed Cost Sharing</u>	<u>% of Total</u>
BWRe	\$2,975,000	54.1%	\$3,910,000	69.8%
BoR Grant	1,000,000	18.2	1,000,000	17.9
WBWCD	1,000,000	18.2	0	0
Sponsor	525,000	9.5	690,000	12.3
TOTAL	\$5,500,000	100%	\$5,600,000	100%

The sponsor has applied for a water quality grant through the state Division of Water Quality. If obtained, the board's cost share will be reduced.

As stated above, WBWCD will pay for all costs related to facilities located on Bureau of Reclamation land. Since those facilities will be owned and operated by entities other than the sponsor, they and their costs have been removed from the proposed project cost estimate.

PURCHASE
AGREEMENT:

The board authorized loan terms of 2% interest over 25 years with payments of \$155,300. If the board commits funds to the proposed project, it is suggested the project be purchased at 1% interest over 30 years with annual payments of approximately \$151,600.

BOARD OF WATER RESOURCES

Committal of Funds

Conservation and Development Fund

Appl. No.: **E-231**
Received: 9/19/07
Approved: 10/12/07
Authorized: 8/9/12

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: **MORONI IRRIGATION COMPANY**

President: Reed Rawlings
P.O. Box 321
Moroni, UT 84646
Phone: 435-851-3415

LOCATION: The proposed project is located in and around Moroni City, about 20 miles north of Manti in Sanpete County.

PROJECT SUMMARY: The sponsor is requesting financial assistance from the board to replace deteriorating ditches and canal with approximately 14.4 miles of pipeline. The sponsor also plans to rehabilitate its two diversion structures on the San Pitch River, construct sediment control structures, and add flow measurement equipment.

COST ESTIMATE: The cost estimate and sharing remain as authorized:

<u>Agency</u>	<u>Cost Sharing</u>	<u>% of Total</u>
Board of Water Resources	\$2,975,000	59.5%
WaterSMART Grant	1,500,000	30.0
Sponsor	<u>525,000</u>	<u>10.5</u>
TOTAL	\$5,000,000	100%

If the board commits funds to the project, it is suggested the loan terms remain as authorized: the project be purchased at 1% interest over 29 years with annual payments of approximately \$120,000.

BOARD OF WATER RESOURCES

Special Item

Additional Funds

Dam Safety and Revolving Construction Funds

Appl. No.: **E-077, C-035**
Received: 4/18/02
Approved: 6/14/02
Authorized: 1/30/04
Re-auth: 3/12/08
Committed: 8/19/10, 3/12/08

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: **NEW ESCALANTE IRRIGATION COMPANY**

President: Gary Harding
P.O. Box 535
Escalante, UT 84726
Phone: 435-826-4202

LOCATION: The proposed project is located about one mile northwest of Escalante in Garfield County.

PROJECT SUMMARY: The board committed \$7.52 million as a dam safety upgrade grant (80%) and \$300,000 in loan funds to the sponsor to remove, replace, and raise Wide Hollow dam. Construction was completed in spring 2011 and the dam has performed well.

Before construction was complete the contractor indicated it intended to file a claim for additional payment because it perceived subsurface conditions were different than indicated by the engineer. It subsequently made a formal request for additional compensation of approximately \$3,600,000 for the differing conditions, dewatering and flood damage costs, and delay of work because of archaeological work on the right abutment. Discussions between the sponsor and contractor were held and settlement offers proposed, but the claim went to mediation on August 14, 2012. Although it felt additional compensation was not warranted, following mediation the sponsor made an offer of \$1 million, which

appears close to what the contractor is willing to accept.

Historic Native American dwellings were discovered and excavated, and artifacts were recovered at cost of over \$500,000; however, documentation and curation has yet to be accomplished, which may cost up to an additional \$200,000.

The sponsor requests the board provide additional grant and loan funds to help it cover the unexpected costs. Staff recommends the board grant additional dam safety funds of \$620,000 (for a total of \$8,140,000) and increase the loan amount by \$380,000 to \$680,000. This split is based on the percentages of the project that were dam safety and dam enlargement related.

COST ESTIMATE
& SHARING:

The committed and proposed cost estimate and sharing are as follows:

<u>Agency</u>	<u>Committed</u> <u>Cost Sharing</u>	<u>% of</u> <u>Total</u>	<u>Proposed</u> <u>Cost Sharing</u>	<u>% of</u> <u>Total</u>
BWRe Loan	\$300,000	2.3%	\$680,000	4.8%
BWRe Grant	7,520,000	57.8	8,140,000	57.2
Fed. Grant	5,000,000	38.5	5,200,000	36.6
Sponsor	180,000	1.4	200,000	1.4
TOTAL	\$13,000,000	100%	\$14,220,000	100%

CONTRACT
AMENDMENTS:

The contracted loan terms are 0% interest with payments of \$14,600 for the first 14 years and approximately \$47,800 for the last two years. If the board commits additional funds, it is suggested the grant contract be amended to provide an additional \$620,000 grant, and the loan contract be amended to provide an additional \$380,000 loan, which will be returned at 0% interest with payments of \$14,600 for the first 12 years, \$126,000 for the next three years, and the balance to be paid the final year.

BOARD OF WATER RESOURCES

Special Item

Contract Amendment - Additional Funds

Dam Safety Funds

Appl. No.: **C-042**

Received: 5/7/12

Committed: 8/9/12

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: **HUNTINGTON-CLEVELAND IRRIGATION COMPANY**

President: Allen Staker
P.O. Box 327
Huntington, UT 84528
Phone: 435-687-2505

LOCATION: Miller Flat Dam is located about 24 miles northwest of Huntington in Emery County.

SUMMARY: In August 2012 the board committed funds for the Phase II dam safety upgrades to Miller Flat Dam. Construction has now been completed and final costs exceeded the amount committed by the board.

The sponsor requests an additional \$130,000 in dam safety grant and loan funds to cover the remaining project expenses.

COST SHARING & REPAYMENT: The committed and proposed cost sharing and repayment are:

<u>Agency</u>	<u>Committed Cost Sharing</u>	<u>% of Total</u>	<u>Proposed Cost Sharing</u>	<u>% of Total</u>
BWRe Grant	\$ 693,000	90%	\$ 810,000	90%
BWRe Loan	77,000	10	90,000	10
TOTAL	\$770,000	100%	\$900,000	100%

If the board commits the additional \$130,000, it is proposed the board increase the dam safety grant to \$810,000 and the loan to \$90,000, which will be returned at 0% interest over 10 years with annual payments of about \$9,000.

BOARD OF WATER RESOURCES

Special Item

Contract Amendment - Additional Funds

Dam Safety Funds

Appl. No.: **C-019**
Received: 5/10/10
Approved: 5/27/10
Auth/Comm: 10/14/10

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: **FREMONT IRRIGATION COMPANY**

President: Andrew Taft
Box 246
Loa, UT 84747
Phone: 435-691-4975

LOCATION: The proposed project is located at Mill Meadow Reservoir, four miles northeast of Fremont in Wayne County.

PROJECT SUMMARY: In its October 2010 meeting the board authorized and committed dam safety grant and loan funds (\$369,000 and \$41,000, respectively) to install an upstream guard gate and HDPE pipe outlet liner at Mill Meadow Dam, as required by Dam Safety minimum standards. During design it was discovered a thicker walled pipe was needed in the upper half of the outlet; bid prices came in higher than expected due to the difficulty of the project; the State Engineer's Office of Dam Safety required the sponsor to remove rock and debris that had fallen into the spillway; and the sponsor wishes to install a meter on the outlet pipe while work is ongoing to replace a concrete measuring structure that was removed to make room for the project. The sponsor requests additional grant and loan funds to cover these additional costs.

It was hoped construction would be completed soon after funds were committed in 2010; however, due to water and other issues it was delayed and is just now

under construction. The first loan payment was scheduled for December 1, 2012.

COST ESTIMATE
& SHARING:

The committed and proposed cost estimate and sharing are as follows:

<u>Agency</u>	<u>Committed Cost Sharing</u>	<u>% of Total</u>	<u>Proposed Cost Sharing</u>	<u>% of Total</u>
BWRe Grant	\$369,000	90%	\$450,000	90%
BWRe Loan	41,000	10	50,000	10
TOTAL	\$410,000	100%	\$500,000	100%

CONTRACT
AMENDMENTS:

The contracted loan terms are 0% interest over approximately 10 years with payments of \$4,100 beginning December 1, 2012. If the board commits the additional \$90,000, it is suggested the grant contract be amended to provide 90% of the project cost up to \$450,000, and the loan contract be amended to provide 10% of the project cost up to \$50,000, which will be returned at 0% interest over approximately 10 years with payments of \$5,000 beginning December 1, 2013.

BOARD OF WATER RESOURCES

Special Item

Withdrawal

Revolving Construction Fund

Appl. No.: **E-291**
Received: 3/3/11
Authorized: 3/16/11
Committed: 3/16/11

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: ***BAKER RESERVOIR COMPANY***

President: Robert Houston
461 East Center Street
Central, UT 84722
Phone: 435-574-2905

LOCATION: Baker Reservoir is located about 24 miles north of St. George in Washington County.

SUMMARY: The sponsor requested financial assistance to repair erosion damage to the spillway of Baker Dam. Damage occurred in December 2010 when an extreme rainfall event caused high water flows to pass over the dam's weir wall spillway. Repair work has since been completed by installing grouted riprap in the affected areas. Due to low project costs, the sponsor does not need the board's assistance. Staff therefore recommends the application be withdrawn from further consideration by the board.

BOARD OF WATER RESOURCES

Special Item

Withdrawal

Revolving Construction Fund

Appl. No.: **E-315**

Received: 7/3/12

Approved: 8/9/12

To be Presented at the December 7, 2012 Board Meeting

SPONSOR: ***DEEPWATER DISTRIBUTION COMPANY***

President: Sean Brown
Box 2443
Park City, UT 84060
Phone: 435-640-7111

LOCATION: The project is located approximately 1/2 mile south of Park City in Wasatch County.

SUMMARY: The sponsor applied to the board for financial assistance to install a culinary water system in Brighton Estates. The project does not meet the board's guideline in that less than 10% of the residents live there year-round. Additionally, the cost per connection even at full build-out would have been very high, and given the uncertain nature of the development this causes staff considerable concern about repayment. Staff therefore recommends the application be withdrawn from further consideration by the board.

BOARD OF WATER RESOURCES

Application Summary

Appl. No. ***E-321***

Received: 10/15/12

SPONSOR: ***NORTHWEST IRRIGATION COMPANY***

President: Mike Wasuita
4611 Powder Horn Road
Morgan, UT 84050
Phone: 801-876-3043

LOCATION: Northwest Reservoir is located about one mile north of Mountain Green in Morgan County.

PROPOSED PROJECT: The sponsor is requesting financial assistance from the board to replace the main outlet gate valve and outlet pipe situated at the south end of the Northwest Reservoir basin.

WATER RIGHTS: 35-5058, 5059, 5060, 5061, 8216, 8246, 10883, 11372, and 11470.

COST ESTIMATE: \$480,000

BOARD OF WATER RESOURCES

Application Summary

Appl. No. ***E-322***

Received: 10/30/12

SPONSOR: ***MARION WATERWORKS COMPANY***

President: Bronson Smart
3128 North 900 East
Kamas, UT 84036
Phone: 435-783-2018

LOCATION: The proposed project is located about three miles
north of Kamas in Summit County.

PROPOSED PROJECT: The sponsor is requesting financial assistance from
the board to drill and equip a culinary water well.

WATER RIGHTS: 35-694, 8986, and 8896.

COST ESTIMATE: \$250,000